Defense Research Engineering Network

DREN

SDP PLAN TEMPLATE

DATE

VERSION 1.0

Revision History

DATE	AUTHOR	REVISION	COMMENTS
9-17-02	DREN I&I	0.4	Initial Draft
10-11-2002	DREN I&I	0.7	Second Draft
11-13-2002	DREN I&I	1.0	Reformatted

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1 General Site Data

1.1 Site Identification

Customer Order Number: DCA200-02-D-5003 (XXXX)
DREN Contract Number _____

Name: _____

Address: _____

City: _____ State: Zip:

Primary Customer Representative (POC): _____

Phone: _____ Fax: _____
Email: _____ Pager: _____
Secondary Customer Representative (POC): _____

Phone: Fax:
Email: _____ Pager: _____

1.2 WorldCom Program Office Identification

WorldCom Representative Pre-Transition (POC): _____

Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: Fax:
Email: Pager:

WorldCom Representative Post-Transition (POC): _____

Title: _____

Address: _____

City: _____ State: Zip:

Phone: _____ Fax:
Email:
_____ Pager: _____

1.3 Applicable Documents

Applicable documents include equipment manuals, site survey guide, site diagrams, building diagrams, floor plans, and any plans and/or documents to assist in the alterations/modifications. The Site's performance and findings shall be in compliance with the following specifications and regulations:

1. All applicable sections of local and state building codes.
2. The latest edition of these:

a. American Institute of Steel Construction (AISC).
b. American Welding Society (AWS).
c. American Concrete Institute (ACI).
d. Electronic Industries Association EIA Standard RS-232.
e. American Society for Testing and Materials (ASTM).
f. National Fire Protection Code (ANSI/NFPA-100).
g. NFPA - National Electric Code (ANSINEC-70).
h. American Society of Heating, Refrigeration Air Conditioning Engineers' Code.

1.4 SDP Equipment Description

The type of service and equipment being installed:

Nonrecurring Charge - (NRC) Contract Year 1 - 19 June 2002 through 18 June 2003		
CLIN #	Schedule of Supplies/Services	Qty

1.5 SDP Rack Front Elevation Drawing

The front elevation of the SDP rack that is being installed at this site is shown in Section 7.

1.6 Revised SDP Equipment Ordered

Nonrecurring Charge - (NRC) Contract Year 1 - 19 June 2002 through 18 June 2003		
CLIN #	Schedule of Supplies/Services	Qty

1.7 Cable Routing

Cable and signal wiring routing and termination for the CPE is verified from points of origin through destination in accordance with manufacturer's and/or WorldCom's wiring diagrams associated with the SDP hardware configuration. Site cabling for the installed Customer Located Network Equipment (CLNE) will normally originate at the network demarcations and terminate at the cross-connect field where the local access cable terminates. Power, ground, fiber optic patch panels, facility egress panels, UTP, modular jacks (e.g., RJ11, RJ-48), BNC, and inter-rack connections represent the array of connectivity options to be considered. Specific cable routing modifications are covered under Site Alteration Sub-Plan. Those items listed in **Table 1.6-1** Cable Requirements will be installed at this site.

Table 1.6-1: Cable Requirements

Interface To Be Installed	Cable Type, Connector

Interface To Be Installed	Cable Type, Connector
Console port Modem	DB9/RJ45
Modem – Pots Line	RJ11/RJ11

1.8 Power

1.8.1 AC Power

1.8.1.1 AC Power Requirements

The utility power must satisfy the following criteria:

a. Frequency: 60 Hz ±3 Hz.

b. Voltage Regulation: ±10%.

c. Transients: Up to 200V for periods to one second.

d. Utility power feeders shall be sized to limit voltage drop to no more than 2% of nominal at full operating load and shall be breaker protected.

e. Surge Protection: Surge arrestors (standard type) are Government provided.

f. No more than 5% Total Harmonic Distortion (THD).

Power requirements were verified during the site survey, and modifications, if any, are covered in the Site Alteration Sub-Plan. The above power specifications will be verified prior to installation.

1.8.1.2 AC Power Quantity Requirements

All power connections will be installed in accordance with the American National Standards Institute (ANSI) 70-National Electrical Code (NEC), article 210 and 220. Distribution circuit breakers are as follows: two 20A at 120 VAC, I phase, 3 wire for SDP equipment rack. Power modifications are covered under Site Alterations Sub-Plan. Power quantity requirements will be verified prior to installation.

1.8.1.3 DC Power Requirements

DC power connections, if required, will be dual 20 amp –48vdc nominal feeds with circuit breakers. 12 AWG. DC Wiring is required to the SDP equipment rack. Power modifications are covered under Site Alterations Sub-Plan. Power quantity requirements will be verified prior to installation.

1.9 Heating, Ventilating, and Air Conditioning (HVAC) Requirements

The HVAC requirements for a Juniper M-5/10, will not exceed 3850 British Thermal Units (BTU). The equipment is designed to run optimally at temperatures below 104° F (40° C) and above 32° F (0° C). The equipment will operate from 5 to 90 percent relative humidity not condensing at altitudes up to 10,000 feet Above Mean Sea Level. HVAC requirements were verified during the site survey, and modifications, if any, are covered under the Site Alteration Sub-Plan. The HVAC requirements will be verified prior to installation.

1.10 Plumbing Requirements

The SDP equipment is not equipped with a core or liquid coolant system; therefore, no external plumbing will be required to cool the equipment. Equipment installed in facilities that have liquid cooling systems under the floor may present a problem where the coolant lines interfere with the power, cable, or airflow. Plumbing requirements were verified during the site survey, and modifications, if any, are covered under the Site Alteration Sub-Plan. The Plumbing requirements will be verified prior to installation.

1.11 General

This section details the open items that must be resolved at this site before the DREN equipment becomes operational. This section is provided as a convenience to both WorldCom and the Government and does not supercede the Sub-Plans.

1.12 Open Items

POTS Lines: POTS lines are needed at all SDPs prior to installation.

2 Site Alteration Sub-Plan (If Applicable)

3 Installation/Modification Sub Plan

3.1 General

This plan was prepared in accordance with Government Contract No. DCA-200-02-D-5003, Statement of Work (SOW), Paragraph 3.1.1.2.

3.1.1 Purpose

The purpose of the Installation/Modification Sub-plan is to provide a detailed and rational approach to installing a new SDP site, or modifying existing service.

3.2 Installation Services

Many functions normally associated with installation occur before the equipment is shipped to site and, therefore, are transparent to Government site personnel. All equipment is assembled, cabled, loaded, configured, and tested prior to leaving the WorldCom staging facility, in Richardson, Texas.

3.2.1 Space

The SDP equipment is pre-configured in a standard 19' Relay Rack. Service access requirements are 3 feet from the front and 2 feet from the rear.

3.2.2 Power

Power required for SDP equipment is two (2) 20 Amp AC circuits, terminated with NEMA 20R receptacles located within 3 feet of the SDP cabinet.

3.2.3 HVAC

HVAC installation/modification is not required for this SDP installation.

3.2.4 Plumbing

Plumbing installation/modification is not required for this SDP installation.

3.2.5 Floor Loading

The floor loading for an SDP will not exceed 625 pounds.

3.2.6 Cabling Requirements

Table 3.2.7-1 shows the required cabling.

Table 3.2.7-1: Cable and Wire Connections

Interface To Be Installed	Cable Type, Connector
Console port Modem	DB9/RJ45
Modem – Pots Line	RJ11/RJ11

3.3 Storage Space Requirements

WorldCom has no requirements for long-term storage at this site.

3.4 Staging Area Requirements

This site has made space available within room XXX for staging.

3.5 Impact Analysis

4 Acceptance Test Sub-Plan

4.1 Introduction

This section outlines an individual Acceptance Test Plan as per the DREN SOW section 3.3.1.1.3 (SDP Acceptance Testing Sub-Plan) that will be used to validate the proper installation and operation of a DREN SDP with its ordered Digital Data Transfer Services (DDDTS) Interfaces. The goal of the test plan is to ensure that an ordered DREN SDP with one or more DDDTS interfaces is or are configured correctly and will operate in accordance with DREN DDDTS service requirements. Successful execution of this plan will result in an "active" DDDTS SDP with Type "A" and or Type "B" services interfaces that meet the requirements listed in section's 3.4, 3.6, and 3.7 of the DREN SOW.

To provide a customer interface to the WorldCom vBNS+ backbone, WorldCom will provide a Juniper M5/10 IP router at the customer site with the required DDDTS interfaces. The Juniper M5/10 IP router will include the appropriate protocol interfaces needed to interface with customer owned equipment. The CPE is the responsibility of the customer as is the connection from the CPE to the interface point between the CPE and the Juniper M5/10 IP router. The connection from the Juniper M5/10 IP router to the WAN connection to the vBNS+ network is the responsibility of WorldCom.

4.2 Testing Methodology

The Test sub-plan of the individual SDP plan provides for the setup and testing of a newly installed SDP and or DDDTS service interfaces using a non-customer traffic bearing SDP as a reference. The reference SDP allows SDP to SDP testing to be performed without negatively impacting operational SDP sites. The test will be using IP and ATM traffic flows using NetAlly.

The SDP Acceptance sub-plan will have test case to cover:

- ✓ That the a newly installed SDP and or DDDTS service interfaces meets the performance requirements per section 3.4 of the DREN SOW for:
  - ♦ SDP through-put,
  - ♦ IP Performance/Packet Loss
  - ♦ ATM services requirements
- ✓ That the newly installed SDP and or DDDTS service interfaces are configured as per the Delivery Order and the routing requirements as per section 3.4.6.1 of the DREN SOW for IP routing.
- ✓ That the a newly installed SDP and or DDDTS service interfaces
  - ♦ Can be centrally managed and monitor for In-band and out-of band Problem and Fault Isolation and
  - ♦ The SDP is correctly configures to provide performance data as required by section 3.6 of the DREN SOW.

(Body of Test Sub-Plan omitted in SDP Plan Template)

5 Termination/Restoration Sub-Plan

5.1 General

This plan was prepared in accordance with Government Contract No. DCA-200-02-D-5003, Statement of Work (SOW), Paragraph 3.3.1.1.4.

5.1.1 Purpose

The purpose of the Termination / Restoration Sub-Plan is to provide a detailed and rational approach to the termination of services and the removal of SDP equipment.

5.1.2 Equipment To Be Removed Upon Termination

Equipment installed at a specific SDP is listed in Section 1 of the SDP Plan.

5.1.3 SDP Termination Impact Analysis

WorldCom has reviewed the impact of the Termination Order for the applicable SDP. This is broken down into four categories:

- *Site User Community*
- *Upstream Dependencies*
- *Downstream Dependencies*
- *Network Dependencies.*

This section will be updated as changes are made either at this site or when another SDP's termination would affect the SDP's services.

5.1.3.1 Site User Community

Users of the DREN services at _____ will be isolated from other DREN sites and the remainder of the global Internet upon termination unless another provider of Internet Network Services is connected prior to the execution of the order. WorldCom, under the provisions of this contract, is unable to completely track the site's other network connections.

Based upon the information provided during the Site Survey and no other network connection has been identified, the execution of the Termination Order will isolate all site network users.

Upon receipt of the Termination Order, WorldCom will contact the Site POC, establish the site's current state of network connectivity, and work with the POC to minimize disruptions to the site's User Community to the extent permitted by the Order.

5.1.3.2 Upstream Dependencies

There are no known Upstream Dependencies.

5.1.3.3 Downstream Dependencies

There are no known Downstream Dependencies.

5.1.3.4 Network Dependencies

Upon execution of this Order, the following Network Dependencies will be addressed:

- *The CBR services provisioned for this site will be removed*
- *PVC's provisioned for the site will be removed*
- *SVC's provisioned for the site will be removed*
- *Entries in the DREN DNS server related to the site will be removed*
- *Entries in the DREN NMS related to the site will be removed.*

5.1.4 Recommended SDP Site Termination Schedule

This section of the Termination Sub-Plan addresses the requirements of the SOW, Paragraphs 3.3.1.4). A schedule will be provided upon receipt of a Termination Order.

6 Instruction Sub-Plan

6.1 General

This plan was prepared in accordance with Government Contract No. DCA-200-02-D-5003, Statement of Work (SOW), Paragraph 3.3.1.1.1.5.

6.1.1 Purpose

The purpose of the Instruction Sub-Plan is to provide a description of WorldCom Government Market's approach to training content and execution for Government personnel located at each SDP site.

6.1.2 Compliance

*The Instruction Sub-Plan to the DREN contract Statement of Work (SOW) compliance matrix is shown in **Table 6.1.2-1**.*

Table 6.1.2-1: Instruction Compliance Matrix

Item #	SOW Ref. #	Requirement	Notes	Sub-Plan Para. #
	3.3.1.1.5	*An Instruction Sub-Plan which shall provide:*		
1	*(a)*	*Recommended types and*		*6.2.1*
2		*Amounts of training the Government should consider ordering; and*		*6.2.2.4*
3	*(b)*	*Schedule*		*6.2.4*

6.1.3 Procedure

Instructional services for personnel at the SDPs will be delivered primarily through distance learning via WorldCom's Net Conference system. Each distance learning course for SDP personnel will also be available for instant replay for 30 days, providing 24/7 online access to individuals who are not able to attend live classes.

6.1.4 Training Requirements

In accordance with the requirements of the SOW, paragraph 3.7.5.1, all courses will provide instructional services to Government designated personnel for the purposes of fully understanding and using the services provided under the DREN contract. At a minimum, the training will address how to:

a. Report DREN trouble and follow-up on previously reported issues.

b. Use the SDP analysis and testing capability provided by the WorldCom Team

c. Request SDP routine operational services

d. Perform SDP setup for connectivity to the Wide Area Network (WAN).

6.2 Instructional Services

This section of the Instruction Sub-Plan addresses the requirements of the SOW, Paragraph 3.7.5.1.

6.2.1 Recommended Type of Training

6.2.2 *The type of training will be Computer-Based Distance Learning. Classes will include instruction on all material described in paragraph 6.1.4.* Training Courses

All training classes are designed to provide DREN Site Point of Contact (SPOC) and SDP personnel with the most up-to-date information on the DREN Network, and associated hardware and software.

6.2.2.1 DREN Orientation and SDP Operations

The DREN Orientation and SDP Operations Course for SDP personnel and Site Points of Contact will consist of six modules: Course Overview; DREN Architecture and Organization; Network Management; Security; Implementation; and an Introduction to the WCOM DREN support team. The course material in these modules is designed to provide SDP personnel with an orientation to the DREN system, what services are being provided, and information on the SDP and backbone architecture. Participants will receive an overview of the tools being deployed as part of the DREN solution including web software interfaces, customer care and details about the DREN NOC. The class also includes a detailed network implementation plan and schedule and pre and post WCOM DREN account team contact information.

6.2.2.2 DREN Customer Care: GMOE - Order Tracking System

This leader lead training class will provide instruction on the WCOM DREN GMOE system. Participants will learn how to: provision and track routine service requests and task orders via this system, which was created especially for DREN customer support needs.

6.2.2.3 DREN Online Report Training

DREN Online Report Training will include instruction for designated users on how to access web based reports on asset management, change management and Trouble Tickets via Remedy. Participants will also be instructed on how to access security reports generated by the WCOM CNIC system, as well as network performance data produced by Concord Network Health software. Documentation on the CINC, Remedy and Concord Network Management software systems will be provided to designated users.

6.2.2.4 Recommended Amount of Training

WCOM recommends that all SDP Points of Contact and personnel requiring access to online reports and network management information participate in all three training modules.

6.2.3 Training Computer Configuration Requirements

This section of the Instruction Sub-Plan addresses the computer configuration recommendations for the equipment at each site that will be used for accessing the CBT courseware.

6.2.3.1 Designed for Multiple Internet Browsers

The web-based Network Conference training for this course was designed to operate on multiple Internet browsers. For maximum operating efficiency all other software programs should be closed when accessing WCOM Net Conference classes.

6.2.3.2 Minimum Configurations

All DREN SDP courses should be accessed with a PC capable of a minimum speed of 56K access to the Internet.

6.2.3.3 PC

Processor:	*Intel Pentium 500 Mhz*
Operating System:	*Windows 95, 98, NT, XP or 2000*
RAM	*64 MB RAM*
Monitor:	*800 x 600 pixel resolution or greater (1024x768 pixels recommended)*
Browser:	*Netscape Navigator V 4.0 or later, Microsoft Internet Explorer 4.0 or later, Microsoft JVM or Sun's JVM or I.E.*
Internet Connection	*56K or faster (participants may join at 28.8 but it is not recommended)*

6.2.4 Schedule

DREN Orientation and SDP Operation will be rolled out in December 2002.

DREN Customer Care: GMOE order tracking system training will be available January 2002.

DREN Online Report training will be offered beginning in March 2002.

DREN Security Software and System training will begin in March 2002.

7 Site Survey

Defense Research Engineering Network

Site Survey

Surveyed Site: _____

Survey Date: _____

7.1 Site Information

Site location:

Site shipping address:

Building number:

Site contact:

Contact organization

Contact phone:

Contact E-mail:

Contact fax #: _____

Contact work hours: _____
(include time zone)

Comments (list any specific security requirements of the site, special instructions for locating facility, etc):

_____

_____

7.2 Rack

DREN assigned rack location: _____

Rack height (circle one): 7' 8' Other: _____

Cable management system (circle one): NO Cable Ladder below Cable Ladder overhead

Is assigned rack location already prepared for new rack (i.e. holes pre-drilled in raised floor, concrete anchors drilled and set into floor, etc): _____

Cable ladder width (if various widths are present, note the width of the applicable cable ladder runs on the floorplan and subsequent drawings that depict the cable ladder grid, where applicable): _____

Please provide a floorplan drawing showing the dimensions of the equipment room, indicating where the various rows of equipment are located, and showing where the assigned DREN rack is to be located. Include the cable ladder grid and its relationship to the rows of equipment. If any of the equipment connected to the DREN bay is located in a room (or rooms) outside of the equipment room the DREN rack is to be installed, indicate on the drawing where the cabling access tunnel(s) to the other room(s) is located.

Comments (list any special requirements of the rack installation, including requirements [if any] for special seismic bracing, floor weight limitation issues, etc): _____

_____
_____
_____

7.3

_____
_____

_____

_____

7.4

_____

_____

7.5 AC Power

Site AC Power: Voltage _____ Frequency _____

Is site AC power on UPS? (circle one): Yes No

Is AC Power available in the equipment room? (circle one): Yes No

If 'Yes', where are the equipment room AC breakers located?: _____

_____

What is the amperage of the equipment room AC breakers?: _____

Distance from breaker panel to DREN rack?: _____

Please provide a drawing depicting the AC breaker panel, and its spatial relationship to the floor, ceiling, and cable ladder.

If 'No' [AC Power available in the equipment room], provide details as to the location and amperage of the nearest AC power breakers to the equipment room: _____

_____
_____

Please provide a drawing depicting the distance and location of the nearest AC breaker panel to the assigned DREN rack. If the AC breaker panel is not in the equipment room, depict the relationship between the room the AC breakers are in and the equipment room, in relation to the assigned DREN rack. Include in the drawing the proposed path the AC power cable will take between the AC breaker panel and the DREN rack, including a representation of the cable ladder grid.

If 'Yes' [AC Power available in the equipment room], is there an AC power outlet in either of the equipment racks adjoining the assigned DREN rack (circle one): Yes No

There is a requirement to have AC power ran to the assigned DREN rack location. Can the site personnel extend the AC power to the DREN rack location, and provide outlet? (circle one): Yes No

If 'Yes', please list any details necessary to facilitate the extension of power to the assigned rack location:

_____
_____

If 'No' [Can the site personnel extend the AC outlet to the DREN rack location], discuss with site operations contact and list possible options for getting AC power ran to the assigned DREN rack location:

_____
_____

Provide a drawing of the existing AC power conduit routing from the AC breaker panel to the area near the assigned DREN rack location, noting where junction boxes are. Include a representation of the cable ladder grid (if applicable).

Comments (list any comments relevant to the installation, extension, etc of the AC power to the assigned DREN rack):

_____
_____
_____
_____

7.6 DC Power

Is DC power available at this facility? (circle one): Yes No

If 'No', skip the rest of this section.

If 'Yes', what is the voltage? (circle one): -48 -24 Other: _____

Are DC breakers available in the equipment room? (circle one): Yes No

If 'Yes', what is the distance and location of the nearest DC breakers to the assigned DREN rack:

_____

What is the assigned DC breaker? Shelf/breaker number (two needed):

_____

What is the amperage of the assigned breaker (10 amp [minimum] breaker needed):

_____

What gauge wire will the breakers accept?:

_____

Please provide a rackface drawing of the DC breaker bay, indicating the shelf and breaker assigned.

If no breakers are available, whom should provide the new breakers? (circle one): Site WorldCom

If 'No' [Are DC breakers available in the equipment room], provide details as to the distance and location of the nearest DC power breakers to the equipment room:

_____

_____

_____

Two DC power and grounding feeds are required for the DREN rack. Is DC power cabling pre-run to the assigned DREN rack location ? (circle one): Yes No (If 'No', skip next question)

If 'Yes', are two DC cabling feeds pre-run to the rack? (circle one): Yes No

If 'No' [Is DC power cabling pre-run to the assigned DREN rack location], can the site personnel run two feeds of DC power and grounding cabling to the assigned DREN rack location? (circle one): Yes No

Please provide a drawing depicting the distance and location of the nearest DC breaker panel to the assigned DREN rack. If the DC breaker panel is not in the equipment room, depict the relationship between the room the DC breakers are in and the equipment room, in relation to the assigned DREN rack. Include in the drawing the proposed path the DC cables will take between the DC breaker panel and the DREN rack, including a representation of the cable ladder grid. Note the 'flow' of existing DC

cabling from the assigned breaker panel to the other equipment in the lineup the assigned DREN rack location is in.

Comments (list any comments relevant to the cabling, breaker assignments, etc of the DC power requirements of the DREN rack. Include any issues relevant to the DC plant, such as plant power capacity issues, limited amount of open breakers, etc. If a new DC breaker shelf is required, note that as well):

7.7 Facility Grounding

What type of grounding system is on site? (circle one): HALO Single Point Multi-Point

Other:
_____

Is there any RF equipment collocated with the DREN equipment location? (circle one) Yes No

If 'Yes', what type (circle one): Microwave Satellite VHF UHF Other: _____

Distance to DREN equipment?: _____

Is there a Faraday (EMI) cage surrounding the RF equipment? (circle one): Yes No

What is the size of the ground conductor?: _____

Is the cable ladder grounded to the same point as the equipment? (circle one): Yes No

Is the AC service grounded to the same source as the equipment? (circle one): Yes No

Comments (list any comments relevant to the facility grounding): _____

_____

_____

7.8 DS-3

Where is the DS-3 patch panel located ?:
_____

DS-3 patch panel connector type (BNC, WECO, Mini-WECO, etc):
_____

DS-3 patch panel port assignments for monitoring of DS-3 transmission circuits (assigned by site personnel):
_____

Please provide a rackface drawing of the DS-3 patch panel rack, indicating where the assigned ports are located. Indicate the 'flow' of the existing DS-3 cables into the DS-3 patch panel bay.

Distance from DS-3 patch panel to assigned DREN rack location:
_____

Please provide a drawing depicting the distance and location of the DS-3 patch panel to the assigned DREN rack. If the DS-3 patch panel is not in the equipment room, depict the relationship between the room the DS-3 patch panel is in and the equipment room, in relation to the assigned DREN rack. Include in the drawing the proposed path the DS-3 cables will take between the DS-3 patch panel and the DREN rack, including a representation of the cable ladder grid.

Comments:
_____

7.9 Fiber Demarcation

Fiber demarcation rack location (indicate if demarc rack is in a separate room from the assigned DREN rack location): _____

Optical terminating ports assigned for monitoring by site (be as specific as possible, indicating shelf number, shelf type, ports connector type, etc): _____

_____

Distance to DREN rack:

_____

Optical connector type:

_____

Fiber type (circle one): WAN - Single-mode LAN- Multi-mode

Conduit Requirement (existing conduit type, length of conduit needed, etc): _____

_____

_____

Please provide a detailed drawing of the existing conduit installed on/around the fiber demarc bay. Provide a drawing depicting the proposed route the conduit will take from the fiber demarc bay to the assigned DREN rack location, including a representation of the cable ladder grid. If the fiber demarc rack is not in the same equipment room as the assigned DREN rack location, depict the relationship between the room the fiber demarc rack is in and the equipment room the DREN rack is to be installed in, in relation to the assigned DREN rack.

Comments (list any special issues or requirements related to the routing of the fiber conduit, fiber tie cable,

etc):

_____

Telco Demarcation (Internet Service Provider Demarcation)

Location of facility Telco demarcation: _____

Distance between Telco demarc and assigned DREN rack:

_____

Telco connection type (RJ-45, pin-block/wire-wrap, etc): _____

Comments: _____

_____

Notes:

_____

_____
_____
_____
_____
_____